

CLAIMS

1        1.- An articulated arm for an awning comprising an arm (1) and a forearm (2),  
2 with respective first and second ends (1a, 1b; 2a, 2b), where the first end (1a) of arm  
3 (1) includes a securing configuration (3) for an articulated joint to a fixed support, the  
4 second end (1b) of arm (1) and the first end (2a) or the forearm (2) include  
5 respective articulation configurations (4, 5) for a mutual articulated joint, and the  
6 second end (2b) of the forearm (2) is fitted with a support configuration (6) for an  
7 articulated joint with a load bar, with a flexible pulling element (7) housed inside the  
8 arm (1), with a first end (7a) linked to an elastic element (25) secured to a fixed point  
9 (1c) on the arm (1) and a second end (7b) secured to the cited articulation  
10 configuration (5) on the first end (2a) on the forearm (2), **characterised** in that said  
11 articulation configuration (5) of the first end (2a) of the forearm (2) comprises a core  
12 (8) with an exterior surface shaped around a shaft (9) that is transversal to the  
13 longitudinal direction of said forearm and said articulation configuration (4) of the  
14 second end (1b) of the arm (1) comprises a surrounding wall (10) placed around said  
15 core (8) and bearing means (11a, 11b; 12a, 12b) incorporated between said core (8)  
16 and said surrounding wall (10), which are coaxial with said shaft (9) to guide rotation  
17 between both and provide support for the forearm (2) on the arm (1).

1        2.- An arm, in accordance with claim 1, **characterised** in that between the  
2 interior surface of the surrounding wall (10) and the core (8), there is a ring-shaped  
3 space (13) and the articulation configuration (4) of the second end (1b) of the arm (1)  
4 includes an opening (20) between said ring-shaped space (13) and a hollow interior  
5 of the arm (1) for the passage of said flexible pulling element (7).

1        3.- An arm, in accordance with claim 2, **characterised** in that said flexible  
2 pulling element (7) is a belt that terminates at the second end (7b) in a thickened  
3 configuration, which is secured to a corresponding housing (5a) incorporated on said  
4 exterior surface of the core (8).

1        4.- An arm, in accordance with claim 3, **characterised** in that said bearings  
2 means (11a, 11b; 12a, 12b) include at least one pair of first conical surfaces (11a,  
3 11b) located close to, or on, the ends of the core (8) and at least one pair of second

4 conical surfaces (12a, 12b) combined with the first and designed to slide over them,  
5 located at or close to the openings to an interior cavity defined by the surrounding  
6 wall (10).

1 5.- An arm, in accordance with claim 4, characterised in that at least one of  
2 said first or second conical surfaces (11a, 11b; 12a 12b) of each pair is either made  
3 of or coated with a material with a low coefficient of friction in order to facilitate a  
4 sliding movement of the same in contact with the other of the first or second conical  
5 surfaces (11a, 11b; 12a, 12b) of each pair of surfaces in contact.

1 6.- An arm, in accordance with claim 5, characterised in that those first and/or  
2 second conical surfaces (12a, 12b) of each pair of surfaces in contact, which are  
3 made from a material having a low coefficient of friction, are incorporated into  
4 respective ring-shaped parts housed inside the core (8) or on the surrounding wall  
5 (10).

1 7.- An arm, in accordance with claim 6, characterised in that said ring-shaped  
2 parts are made from synthetic plastic.

1 8.- An arm, in accordance with claim 5, characterised in that at least one of  
2 the first and/or second conical surfaces (11a, 11b; 12a, 12b) is located respectively  
3 on the surrounding wall (10) and/or the core (8), or on auxiliary parts joined to them,  
4 and at least one of the first and/or second conical surfaces (11a, 11b) of each pair of  
5 surfaces in contact has either received an antifriction treatment or is coated with a  
6 material having a low coefficient of friction.

1 9.- An arm, in accordance with claim 4, characterised in that the articulation  
2 configuration (5) of the first end (2a) of the forearm (2) consists of a fork defined by  
3 first and second lateral supports parts (17, 18) that face each other, between which  
4 the core (8) is housed and secured by means of a securing pin (19) inserted axially  
5 through at least one hole (17a, 18a) in at least one of said first and second lateral  
6 supports (17, 18), said surrounding wall (10) remaining around the core (8) trapped  
7 between the two first conical surfaces (11a, 11b) and with second conical surfaces  
8 (12a, 12b) in contact with them.

1        10.- An arm, in accordance with claim 9, characterised in that the first lateral  
2 support (17) includes a first hole (17a) and one end of said core (8), close to said  
3 first lateral support (17) incorporates one of the first conical surfaces (11a), and the  
4 second lateral support (18) includes a second hole (18a) with a slightly conical  
5 interior surface on which is seated a surface combined with an end part (21), which  
6 incorporates the other of the first conical surfaces (11b), with said end part (21)  
7 including a central hole (21a) aligned with the central hole (8a) in the core (8), which  
8 is aligned with said first hole (17a) of the first lateral support (17), and a pin (19) is  
9 inserted and retained in a housing defined by said central hole (21a), central hole  
10 (8a) and the first hole (17a).

1        11.- An arm, in accordance with claim 10, characterised in that it includes  
2 some means retaining said pin (19) inside said housing against any movement in an  
3 axial direction.

1        12.- An arm, in accordance with claim 11, characterised in that the first hole  
2 (17a) in the first lateral support (17) and the central hole (21a) of the end part (21)  
3 have slightly conical surfaces and said pin (19) is tubular with end portions that are  
4 widened against said slightly conical interior surfaces of the first hole (17a) and the  
5 central hole (21a) respectively.

1        13.- An arm, in accordance with claim 11 or 12, characterised in that it  
2 includes some plugs (22, 23) for the first and second holes (17a, 18a) in the first and  
3 second lateral supports (17, 18), with said plugs (22, 23) having securing  
4 configurations (24) that are pressure inserted into the hollow pin (19).

1        14.- An arm, in accordance with claim 4, characterised in that the articulation  
2 configuration (5) of the first end (2a) of the forearm (2) comprises a lateral support  
3 (14) that projects from the core (8), and an end part (15) joined to the free end of the  
4 core (8) by means of at least one securing element (16), where one of said first  
5 conical surfaces (11a, 11b) are at the base of the core (8) and another of said first  
6 conical surfaces (11a, 11b) is incorporated into said end part (15), leaving the  
7 surrounding wall (10) trapped between the two first conical surfaces (11a, 11b) and  
8 with the second conical surfaces (12a, 12b) in contact with them.

1        15.- An arm, in accordance with claim 1, characterised in that it comprises at  
2 least one pair of stops (26, 27) located on an interior surface of the surrounding wall  
3 (10) or on said exterior surface of the core (8), in positions adapted to interfere  
4 during rotation of the forearm (2) with respect to the arm (1), with a protuberance  
5 (28) on the exterior surface of the core (8) or said interior surface of the surrounding  
6 wall (10) in order to limit the angle of rotation of the forearm (2) with respect to the  
7 arm (1).